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Chapter 1

Environmental Requirements and Market Access for Developing Countries: Promoting Environmental - Not Trade - Protection

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A. Introduction

The pursuit of sustainable development requires balancing the objectives of economic growth, environmental protection and social development. Achieving a balance between these often-conflicting priorities is difficult enough at the national level, where competing interests are at least grounded in a common environmental, social and economic context. At the international level, where different countries have vastly different circumstances and priorities, it is significantly harder. One of the many ways in which this challenge manifests itself in the real world is in the conflict between the desire to promote trade by reducing non-tariff barriers and the desire to protect the environment and health through the use of technical regulations and standards.

Our understanding of the fragility and interconnectedness of our environmental support systems has grown in lockstep with our attempts to forge closer economic ties between countries, including through negotiations in the World Trade Organization (WTO) of binding commitments on trade liberalization. It is now almost universally accepted that production and consumption can have negative impacts on the environment, whether from resource use or from waste and emissions. It follows that citizens and consumers in developed countries, where environmental protection may be given relatively higher priority, are increasingly imposing their preferences on countries that – while connected both in economic and environmental terms – have fundamentally different contexts and, hence, priorities.

While not exclusively a developed-country phenomenon, consumers in OECD countries increasingly want the goods and services they purchase protected by environmental and related health requirements (ERHRs). Governments have reacted by developing regulations and standards, and non-governmental organizations (NGOs) are taking on a new role in the development of standards and codes of conduct. At the same time, a large number of companies have begun imposing strict requirements on their suppliers. Companies that do not understand their market conditions and trends risk going out of business The trend of ERHRs is an increasingly important market reality, and must not be seen simply through the eyes of protectionism.

Because trade with developed countries makes up an ever-increasing share of the gross domestic product (GDP) of many developing countries,[1] ERHRs can increase the vulnerability of developing-country economies to market conditions beyond their control and capacity to address. Particularly as tariff barriers and quantitative restrictions become dismantled in multilateral and bilateral trade liberalization agreements, there is concern that product and related process requirements have the potential to be misused by countries to create technical barriers to trade. This has led to concerns that some ERHRs are designed not so much to protect the environment or health, as to protect domestic trade interests in OECD countries.

Experience has demonstrated that trade interests can be significantly affected by the establishment of ERHRs. As such requirements in developed countries are mushrooming – increasing in both stringency and complexity – their political impact is also enhanced. Because many ERHRs affect key export sectors and many developing-country exporters have limited capacity to fulfil them, they are often viewed by developing-country governments with suspicion and resentment, notwithstanding the legitimate public policy ambitions that may underlie them. This suspicion and resentment is unlikely to dissipate in the absence of clear criteria that distinguish environment-protective from trade-protective ERHRs.[2]

Although the precise impact of ERHRs is difficult to quantify, few trade and sustainable development experts would deny that recent trends in ERHRs have important implications for developing countries, or that action is needed to address them. This paper argues for a strategic, proactive and cooperative approach, involving exporters and importers as well as standard-setters from both developed and developing countries. The paper first describes in detail the concept of ERHRs and reviews the major trends in such requirements, making the case for why this is an issue that

deserves attention. It then discusses some of the difficulties faced by developing countries, distinguishing between capacity constraints and policy limitations. Finally, it outlines some solutions to existing problems, and argues for the need to broaden the discussion beyond the WTO trade-policy community.

Our conclusion suggests that what is needed, above all, is a commitment by developed- and developing-country governments as well as by importing and exporting companies to work together to ensure stability during the time it takes for exporters to achieve compliance with ERHRs. However, no amount of external actions or assistance can compensate for a lack of activity and commitment at the national level in developing countries. In addition, it appears certain that the challenges created by non-tariff barriers cannot be solved through trade policy alone; complementary industrial policy is also of fundamental importance. The political will to address specific problems – rather than just raise general objections – requires a realistic and informed assessment of the situation; until environmental pressures are reduced, there is little likelihood that ERHRs will diminish in either number or stringency. Moreover, a proactive approach can enable developing countries not only to minimize the potential costs associated with ERHRs, but also to maximize the related domestic economic, social and environmental benefits.

While companies and governments in developing countries must take ultimate responsibility for implementing the necessary changes, there is much that developed countries can do to catalyse, facilitate and provide support through policy coherence, cooperation, transparency and capacity building. The authors believe also that a range of measures can be taken at international, regional and national levels to resolve the unavoidable – but manageable – conflict between economic and environmental priorities. But for these cooperative solutions to be identified and for partnerships to be developed, it is our firm belief that the discussion has to be broadened beyond the traditional WTO trade-policy community to include a more diverse range of stakeholders that cannot participate in WTO meetings. The Consultative Task Force on Environmental Requirements and Market Access recently created by UNCTAD is a step in this direction, and can provide a much-needed forum of dialogue with those stakeholders.

B. Scope and trends of Environmental and Related Health Requirements (ERHRs)

To be able to compete successfully, developing-country producers must – like any other producers – examine and anticipate developments in international markets for their products and services. This includes both regulatory changes and changes in concepts of product quality. Awareness of the link between consumption and consequent environmental impacts is leading not only to increased regulations, but also to the integration of "environmental quality" into consumers' perception of product quality. This is not just limited to the physical characteristics of a product; it also extends to impacts associated with its production process. Thus, if they are to defend and expand their international market shares, developing countries need to treat ERHRs as an integral part of export business strategies at the company level and of economic policy-making at the national level.

1. Scope

The term "environmental and related health requirements" is defined loosely in this paper to include a wide range of different types of voluntary standards and mandatory technical regulations. Indeed, ERHRs is not an easily defined concept. Such requirements can target physical product characteristics, production processes, or both; be developed by governments, companies or NGOs; be mandatory or voluntary; and, even when they are not requirements in the legal sense, the market context may make compliance with them a commercial imperative. Moreover, they can have a myriad of public policy objectives. For example, the regulation of pesticide residues in food products may be instigated to ensure the safety of food, protect the health of farm workers and minimize environmental impact at the point of production. Therefore, some environmental require-

ments may be related to health, food safety or occupational safety, but these should have an environmental aspect during production, use or recovery – this is why we term them ERHRs. The fact that there is no simple definition of ERHRs also makes it harder to identify, understand and address their impacts.

The production of any good or service requires resource inputs and involves some type of waste or emission. Because of this, most ERHRs seek to reduce trade in those goods or services that have *relatively* worse environmental or related health impacts. Thus, while the objective of many ERHRs is not to restrict trade per se, many of these measures do intend to regulate or reduce trade in products or services that do not comply with certain criteria or specifications. In most cases, therefore, it will not be possible to eliminate all trade implications of ERHRs; their objective is to encourage changes in production and trade patterns by altering market conditions. But while overall trade patterns will, in principle, always change, the application of ERHRs could in some cases actually lead to more trade. As a simple example, reducing the amount of pesticide residue on fruit below a threshold that has negative impacts on consumers' health will induce them to purchase and consume more, thus leading to an increase in overall trade in fruit.

Importantly, however, the trade-related impacts of ERHRs are linked not only to the requirements themselves, but also to the procedures by which they are developed, adopted and applied. In some cases, the problem may not be that the company does not want to or is unable to comply with the requirements, but simply that it is not aware of them, or cannot demonstrate that it complies. Recognizing the importance of these procedural aspects, governments have negotiated through the WTO a range of internationally agreed rules to address them. Depending on their nature, ERHRs can fall under the disciplines of either the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) or the WTO Agreement on Technical Barriers to Trade (TBT Agreement). As discussed below, although there are some overarching similarities in both the SPS and TBT Agreements, in certain respects disciplines differ significantly. However, it is important to note that many ERHRs that are commercial (not legal) imperatives, such as supply-chain requirements, do not fall under the relevant WTO Agreements.

Both mandatory and voluntary ERHRs can appear in many different forms, with many different purposes. Some of the most common relate to packaging regulations and certain SPS measures;[3] product content (e.g. limits for certain substances); process requirements (e.g. the standard on Good Agricultural Practice of the Euro Retailer Produce Working Group (EurepGAP) on agrochemicals management); banned substances; energy efficiency; recycled content; and recyclability or degradability, many of which require labelling to demonstrate conformity. Environmental product taxes and charges can be based on some characteristics of the product (e.g. on the sulphur content in mineral oil) or on the product itself (e.g. mineral oil). Take-back obligations are aimed at encouraging reuse and recycling, and related compliance costs may induce more environmentally conscious product development.[4] The next chapter in this *Review* examines developments in environmental policies related to growing volumes of post-consumer waste (in particular electronic waste), based on the principle of *producer responsibility*. It notes the growing relevance of product design requirements. Environmental requirements affecting international trade are also applied pursuant to certain multilateral environmental agreements (MEAs), such as the Montreal Protocol, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Basel Convention.[5]

2. Trends

There is a pronounced trend of an increasing number of ERHRs. According to the WTO Environmental Database (EDB), which used to contain information on governmental ERHRs and other provisions notified under the TBT or SPS Agreements, the share of environment-related notifications under the TBT Agreement has increased from 10 per cent in the early 1990s to 18 per cent in 2002.[6] Although there is no formal tracking system for voluntary ERHRs, evidence from informal

lists suggests that these are growing at least as fast.[7] But from the perspective of a developing-country exporter, the difficulties with ERHRs relate not only to the fact that they are growing in number, but also that they are becoming more stringent and complicated, are subject to frequent changes, and do not tend to follow international standards (although, as discussed later, globalization of trade and investment flows alters this to a certain extent). Therefore ERHR requirements frequently differ from export market to export market, even if the general objective is the same.

Increasing stringency, complexity and multi-dimensionality

Environmental requirements are also becoming more stringent as a result of increased knowledge of the risk and harm to health and the environment, in particular of certain chemicals. For example, threshold limits for certain substances may be set so low (e.g. some maximum residue levels are already expressed in parts per billion) that they are no longer detectable except with the latest equipment, which may not be available or affordable in developing countries. Standards and regulations concerning maximum residue levels (MRLs) for pesticides and other chemicals are thus an issue of concern to developing countries, which, even if they wanted to comply, may not have access to the equipment needed to monitor and demonstrate compliance.[8] In some cases, previously accepted substances are being banned outright, such as mercury regulations in the United States, which have also influenced regulations in Canada. For Guatemala and Honduras, difficulties in complying with their obligations under the Montreal Protocol with regard to methyl bromide have affected their melon exports. These countries have recently obtained funding support from the Multilateral Fund of the Montreal Protocol to overcome this problem.[9]

Not only are ERHRs becoming more stringent, they are also becoming more complex. Recent examples of this trend are the draft chemical safety regulation in the European Union (EU) concerning registration, evaluation and authorization of chemicals (REACH), the draft EU regulation on eco-design for energy-using products (EUPs), and mandatory requirements on recycling and phasing out of hazardous substances for electrical and electronic equipment in the EU, Japan and Switzerland (analysed in the next chapter of this Review). Whereas in the past most standards and regulations focused on specific sectors, recent legislative projects, such as the draft REACH and EUP Directives, or the recycling-oriented policy framework in Japan, have a much broader, cross-sectoral impact that is more complicated to assess and more difficult to address.[10] This complicates the planning and implementation of adjustment measures, especially for developing countries. The often sophisticated technical issues are beyond the ability of many individual companies to address and require sectoral cooperation and government action. In sectors dominated by small and medium-sized enterprises (SMEs), this problem is even more acute.

Part of the complexity is the multi-dimensionality of an increasing number of ERHRs. That is, new regulations and standards often deal with health, food safety and environmental (increasingly also supplemented by social) requirements at the same time, which makes it more difficult to classify them and, in the WTO, to decide whether to notify a regulation under the SPS or TBT Agreement, or both. Examples include regulations on organic agriculture or on mandatory traceability and Hazard Analysis and Critical Control Points (HACCP) of food.

Shift to precaution and risk avoidance

There is a clear trend towards the more widespread use of a precautionary approach on ERHRs in situations where satisfactory or sufficient evidence on negative environmental impact is not yet available. For instance, the draft REACH Directive, which was developed pursuant to the *White Paper on a Strategy for a Future Chemicals Policy in the European Communities*, is based on the precautionary principle. It will effectively reverse the burden of proof in that it will require producers, users and importers of chemicals or downstream industries using chemicals to test, assess and take responsibility for risk management of all chemicals on the European market in order to ensure their safe use.[11] Even more important, there appears to be a move in some developed coun-

tries towards shifting the emphasis in the regulatory framework from (classical) *risk management* to *risk avoidance*.[12] In the EU, for instance, maximum residue levels of pesticides have already reached levels that are far below 0.01 mg/kg.

These recent developments, however, are occurring in the absence of a holistic approach to precaution. In other words, if the precautionary principle is applied to environmental issues it should also be applied to trade-related impacts. This should include issues such as impact assessment, proactive consultations, and the use of complementary tools to ensure that the transition period to compliance is as short, easy and uncomplicated as possible.

Internationalization of environmental and related health requirements

Enhanced globalization of investment and trade flows leads to a spreading of national mandatory or voluntary ERHRs from developed countries to other countries. This internationalization (or often transnationalization) of ERHRs de facto results in a certain harmonization of requirements, in particular through supply-chain requirements, industry codes on good practice or benchmarking. For instance, globally active supermarkets such as Ahold, Carrefour or Tesco tend to apply one global purchasing standard (e.g. EurepGAP) across a range of food items – both internationally and domestically sourced products.[13] In sectors with high trade intensity and a high concentration of related foreign direct investment in developing countries, such as electrical and electronic equipment, mandatory ERHRs in some developed countries also show signs of universal application over time.

Although, from a legal point of view, only a few international standards on ERHRs exist, many of them in key export markets are becoming "transnationalized" through supply chains. They thereby impose requirements that were created with little or no regard to developing countries' environmental situations, development priorities and trade concerns.

The way standards are created – notably voluntary requirements in the private sector – and implemented might give rise to monopolistic, anti-competitive practices. So far, such issues have not been satisfactorily addressed; they require further analysis and, if need be, anti-trust measures. Casella argues that the primary role of governments "is not that of establishing harmonization (of standards) through inter-governmental treaties, but rather setting up the appropriate regulatory framework to prevent anti-competitive outcomes (Casella, 2001).

Closely related and contributing to the trend of transnationalization of ERHRs is the increasing industrial redeployment or outsourcing of manufacturing activities to developing countries. Industrial outsourcing offers opportunities for a new, cooperative partnership whereby both exporting and importing countries can discuss means and required supportive measures to meet a certain target ERHR that is in the interest of both parties. Transnationalization of ERHRs, however, also entails the risk that inappropriate requirements could be imposed on foreign suppliers. This makes it important to ensure that local conditions that are essential for meeting ERHRs are adequately reflected therein.[14]

The third chapter in this Review, on regulation and standards for organic agriculture, elaborates further on the growing convergence between domestic requirements and technical regulations and standards in external markets.

Increasing importance of voluntary ERHRs in the marketplace

Although mandatory ERHRs are generally perceived as having a greater effect on exporters,[15] certain types of voluntary requirements are far more numerous, evolve faster and include more stringent specifications than those mandated by law (i.e. "beyond compliance").[16] These voluntary requirements are increasingly playing a key role in many sectors. Voluntary requirements include

private sector supply-chain management as well as codes, standards and related certification and labelling systems, developed either by private sector associations or non-governmental bodies. While voluntary in the legal sense, these types of environmental requirements can become commercial imperatives[17] if a large proportion of buyers require them. This is particularly acute in sectors with a high market concentration of large multi-national companies, as is the case for certain agricultural, textile and electronic products. The WTO's World Trade Report 2005 comes to the conclusion that "many standards which are public by law are based on technical specifications and initiatives by private standard-setting organizations. The question thus arises as to whether such standards should indeed be considered 'public'."[18]

Three features make voluntary ERHRs more difficult to address than mandatory ones. First, as they fall outside WTO disciplines, there are no clear rules of process that have to be followed in their development and implementation. Even where the TBT or SPS Agreements' provisions on justification, transparency and consultation would apply,[19] the mechanisms to ensure that non-State actors comply with them are relatively few and largely ineffective. Second, as they can emanate from a multitude of sources, they are much harder to track and harmonize. At the same time, successful voluntary ERHRs often become precursors of regulations, which underlines their importance for developing-country exporters. Third, although voluntary requirements are generally very important, many specific voluntary requirements never become a relevant or decisive factor in the marketplace. It is therefore difficult for companies to know whether they should invest in making required adjustments. While this has the potential to affect all exporters, various factors conspire to magnify the relative impact on developing-country exporters, particularly SMEs.

Supply-chain-driven nature of ERHRs

In an effort to respond to consumer-led concerns about the environmental sustainability of their purchasing, the private sector is increasingly developing ERHRs for suppliers. This has resulted in a proliferation of voluntary standards, codes and benchmarks, often as part of commitments under corporate social responsibility (CSR), within risk-management initiatives or integrated product policies. Various schemes combine environmental issues with social issues.

In the food sector, for example, the Euro Retailer Produce Working Group (EUREP), which includes the leading supermarkets in Europe, launched its protocol on Good Agricultural Practice (EurepGAP) for horticultural products in 1999, originally in response to consumer fears over food safety, including local food safety crises. EurepGAP seeks to provide a framework for independent verification of, on the one hand minimum social, environmental and food safety standards throughout the supply chain, and, on the other hand continuous quality assurance and improvement[20] for the production of fresh fruit, vegetables, flowers and ornamentals, green coffee, aquaculture products and agricultural raw materials from overseas (see box). Such measures may affect companies in developing countries, for example on account of the need to collect information to respond to questionnaires, traceability and audit requirements.[21] They may also create a bias towards the operation of large firms, thus risking the crowding out of small firms by the large firms and transnational corporations (TNCs).[22]

In practice, supply-chain-driven requirements seem to account for the majority of all ERHRs in international markets. In many cases, they are more dynamic, stringent and complex than mandatory requirements, envisage a faster phase-out of harmful substances or require changes in processes and production methods.[23] Effective voluntary requirements might also become precursors of government regulations. As can be seen in box 1 on the EurepGAP protocol, some voluntary ERHRs combine mandatory and voluntary requirements (in the EurepGAP case, mandatory requirements on food safety with additional voluntary requirements on food quality).[24] Also, monitoring and effective implementation of many voluntary supply-chain requirements are often stronger than for government ERHRs. However, this has more to do with the supply-chain as a mechanism for effectively pushing requirements than with the content of the requirements themselves.

Therefore, in practice, many environmental standards and labelling programmes are getting spread through supply chains (or "commercial" policies), and not through formal "trade" policy.[25] In some respects, this can be expected to create relatively greater market-access problems. While companies are likely to use supply-chain requirements as a determinant of market access (i.e. if you want to supply to me, conform to my standards or labelling requirements), governments are more likely to use them either as specific conditions for market access (e.g. restrictions on pesticides), or through market-based incentive measures that offer preferential treatment to products or producers that comply (e.g. government procurement that favours environmentally preferable products).[26]

Box 1. The Standard on Good Agricultural Practice of the Euro Retailer Produce Working Group (EurepGAP)

EurepGAP has developed an auditable standard promoting Good Agricultural Practices (GAP), which covers the production of fruit, vegetables and flowers. In September 2004 it introduced a Reference Code for (green) Coffee. EurepGAP has also developed standards for Integrated Farm Assurance and Integrated Aquaculture Assurance.

The EurepGAP protocol defines the elements of good agricultural practices (GAP) and includes topics such as Integrated Crop Management (ICM), Integrated Pest Control (IPC), Quality Management System (QMS), Hazard Analysis and Critical Control Points (HACCP), worker health, safety and welfare, environmental pollution and conservation management. EurepGAP seeks to provide a harmonized set of standards on hygiene, safety and quality for the production of food, which forms the basis of EUREP's retailer procurement requirements. The current checklist for fruit and vegetables comprises several checkpoints, a number of which require rigorous compliance, whereas others are considered "recommendations" or "minor must". The key clusters are:

- Traceability of the product back to the producing farm;
- Record-keeping and internal self-inspection;
- Varieties and rootstocks accounting and management;
- Documentation of site history and site management;
- Documentation of soil and substrate management;
- Recording of fertilizer use;
- Documentation of irrigation and fertigation practices;
- Recording of crop-protection practices;
- Documentation of harvesting methods;
- Records on produce handling;
- Records on waste/pollution management, reuse and recycling;
- Documentation of worker health, safety and welfare;
- Records on environmental issues; and
- Documentation of complaints.

Many of these requirements are similar to establishing an ISO 14001-compliant environmental management system. They all symbolize a transition to high-precision agriculture.

Producer associations or individual growers that meet EurepGAP criteria receive a certificate, which is issued by a EurepGAP-approved independent certifying body. Another option is to participate in the EurepGAP benchmarking option, which facilitates existing national or regional quality assurance schemes to prove equivalence with EurepGAP requirements. This encourages the development of regionally adjusted integrated crop management systems.

Source: EurepGAP checklist for fruit and vegetables, version 2.0, January 2004, accessible at: http://www.eurep.org; CBI, International management system, EurepGAP agriculture, in: CBI Access Guide, accessible at: http://www.cbi.nl/accessguide.

Although voluntary requirements seem to account for the majority of ERHRs for internationally traded goods, there is the apparent dilemma that under current circumstances WTO parties do little to address exporters' ERHR-related concerns.[27] This heightens the need to consider other mechanisms for ensuring that voluntary ERHRs are not inappropriately prepared, adopted and implemented. The initiatives of NGOs in this regard notwithstanding, there is also the question of how these requirements could be analysed and discussed in an intergovernmental setting. If the TBT Agreement sets out a recognized framework for helping governments to minimize trade-distorting regulations, could it not also be a helpful framework for companies to consider?

3. Summary: Scope and trends of ERHRs

ERHRs are not a distinct group of measures: they address a wide range of issues, ranging from species or ecosystem protection to human health and safety. They may also be either mandatory or voluntary, address a single issue or multiple issues, include product- and/or process-related requirements, be developed by governments or NGOs, and be relatively static or very dynamic. Some ERHRs result in differentiation within existing product categories (e.g. recycled paper is seen as an environmentally preferable alternative); others can lead to market segmentation (e.g. organic produce).

All ERHRs seek to restrict trade in goods and services that have *relatively* worse environmental and related health impacts. While mandatory regulations will likely have a greater impact on market access, it is important not to underestimate the overall impact of voluntary requirements. Not only are voluntary requirements growing in number and evolving quickly, if they become integrated into supply chains – as in the case of sustainable forest management standards – they can become commercial imperatives for certain markets. Also, whereas the procedural aspects of voluntary standards can be as important as for technical regulations, most of the provisions in the TBT and SPS Agreements are commitments between governments, and are not binding on NGOs that develop voluntary standards. Finally, standards, in particular when successful in implementing ERHRs, are often the precursors of regulations, and can eventually be integrated into mandatory measures. However, a large number of voluntary ERHRs never become relevant or decisive factors in international markets, which makes it difficult for companies in exporting countries to decide on whether they should invest in making required adjustments.

Consumers, producers, regulators and all concerned stakeholders are becoming increasingly aware of environmental and health problems and are looking for versatile tools to effectively address them. This is leading to more complex ERHRs with broader impacts, and adjustment, which often requires close coordination between a number of actors, including governments. Consequently, adjustment to new ERHRs is a growing and more serious problem, in particular in developing countries. Given their potential impact, some interest groups may use ERHRs – as with other types of standards and regulations – as strategic tools to protect markets or market share.[28]

C. Coping with Environmental and Related Health Requirements

The previous section alluded to a number of possible concerns of developing countries resulting from the imposition of ERHRs. In this section, these concerns are considered more systematically. By identifying the potential problems, it is hoped to provide policy-makers and practitioners with a better basis to find the right solutions. It would help ensure that ERHRs function as tools to promote sustainable production and consumption, and achieve the desired developmental benefits, without unnecessarily or unintentionally restricting market access or hurting the competitiveness of developing-country producers.

One of the main challenges in identifying and understanding problems related to ERHRs is the difficulty in isolating and tracking their impacts. At a fundamental level, the universally harmo-

nized product codes used in the trade nomenclature for tracking trade flows of products do not distinguish between those that are and are not affected by, or comply with, ERHRs. As a result, there is an absence of data on changing trade flows in product segments defined by ERHRs, such as eco-labelled products, or even products of organic agriculture. In addition, ERHRs are only one category of a wide range of specifications that a producer must comply with in order to access a market. Consequently, it is often difficult to conclude that it is an ERHR that is creating the problem with market entry rather than, say, a product quality specification or even difficulty in finding a local distributor. Thus, not only is it almost impossible to identify the changes in trade flows in products that need to meet certain ERHRs, but even if it were possible, it would be difficult to conclude that ERHRs are the sole or most important reason for these changes.

Identification and understanding of the impact of ERHRs on market access is further complicated by the fact that the types of problems that could arise fall into several interrelated clusters of categories that are addressed by different groups of stakeholders (e.g. international organizations, national governments, different ministries, private standard setting bodies, large buyers and NGOs) and discussed in different national and international forums. This results in imperfect problem identification and solution finding, which means that interrelated aspects of the issue cannot easily be addressed in a holistic manner.

It is also worth highlighting that there is "shared responsibility" for resolving adjustment problems to new ERHRs. Some issues need to be resolved by developing countries on their own (e.g. institutional and structural changes); for others, there is a shared responsibility, with developing countries being responsible for the actions but developed countries having some responsibility for assisting them to comply (through trade-related technical assistance and other means highlighted in TBT Article 11). There are other areas where the responsibility lies solely with developed countries (e.g. transparency, stakeholder consultations, ex-ante impact assessment, least trade-restrictiveness of the requirements).

Moreover, it should not be overlooked that government subsidies play a significant role in the adjustment process to ERHRs in various countries, notably in developed ones. As chapter three of this Review shows, producers in a number of developed countries can readily draw on a multilayer financial support mechanism that facilitates transition to and reduces the costs of certification for organic production. Such subsidy schemes are the rare exception in developing countries (the Government of Tunisia, for instance, provides partial subsidies to cover inspection and certification fees for the first five years of organic production). In short, ERHR-adjustment-related subsidies are likely to further distort market access and market prices.

Experience and case studies have demonstrated that there are a number of factors which influence how well developing-country exporters can adapt to ERHRs. Overall, it appears that if developing countries adopt a merely firefighting, rather than a strategic, approach to addressing ERHRs in their key export markets, ERHRs may well hurt international competitiveness. While resolving the problems of market access requires the participation of the importer (country, company, standards body), from a broader, market-entry perspective there are a large number of actions that governments need to take domestically to strengthen export competitiveness. That is, even in the absence of any improvement in export markets, developing countries can act internally to increase the capacity and effectiveness of institutions, infrastructures and legal frameworks, and strengthen their key industries at both the sectoral and enterprise level.

1. Strengthening technical and institutional capacity

Apart from problems related to the complexity, stringency or technical characteristics of certain ERHRs, companies in developing countries face a number of other constraints as a result of structural problems. Many find their export markets restricted, not because their exporters are unwilling to comply with ERHRs, but because of an inability to identify the requirements, access or

afford the required technology, make changes to production techniques, or demonstrate compliance in a credible way. While some of these problems relate to deficiencies at the enterprise level, many of them arise from more fundamental institutional weaknesses. Crucially, countries must start looking at ways to strengthen the institutions needed to deal with ERHRs – that is by establishing early-warning systems, enquiry points, standards bodies, specialized consultants, testing and metrology labs, and accreditation agencies – much as they seek to improve their road networks, ports and telecommunications. All of these form part of the national infrastructure that is essential for enabling companies to participate in international trade.

The fundamental importance of this institutional infrastructure is implied in the texts of the TBT and SPS Agreements, which include specific provisions on technical assistance to help developing countries upgrade their national bodies that deal with such aspects as standards, conformity assessment and accreditation. This issue is addressed in more detail below. At present, most developing countries have insufficient technical capacity to efficiently manage many kinds of standards and technical regulations, including ERHRs. Typically, essential facilities such as laboratories are short of adequately skilled staff, scientific equipment is obsolete for the required tests, and there is little, if any, systematic collection and recording of information.[29] Even when equipment and testing is available, the laboratories may not be recognized by authorities or companies in the importing country, and so tests must be commissioned from foreign laboratories. This increases the relative costs of conformity assessment for firms in developing countries. As UNCTAD and OECD case studies demonstrate, many of these constraints have obvious cumulative effects (UNCTAD, 2004b; OECD, 2002a).

This lack of national infrastructure leads to three general problems at the enterprise level. First, in those cases where a company's comparative advantage lies in maintaining low capital costs and high labour inputs, even relatively small additional investments in equipment can overstretch available short-term credit limits and result in substantial increases to marginal costs. This is especially the case for SMEs. Second, the required equipment or management expertise may not be available locally,[30] and local companies may not have the capacity to conduct international searches for suitable suppliers. Finally, even where equipment or consulting services are available locally, they are most likely to be provided by foreign firms at prices that tend to be higher than in developed countries. Thus, even when companies in developing countries are able to comply with importers' ERHRs, their costs are likely to be relatively higher than for competitors in developed countries.[31]

Where national infrastructure is inadequate, large TNCs may be able to invest in upgrading their own facilities, particularly in the case of intra-firm trade rather than direct retail trade. But where export industries are composed of a significant proportion of SMEs, the lack of financial resources prevents them from addressing critical trade-related infrastructural deficiencies. Recent research by UNCTAD and the OECD on the leather industry in several Asian countries (Bangladesh, Cambodia, China, India, the Philippines, Thailand and Viet Nam) suggests that ERHRs can actually drive industry concentration, reducing the number of small, family-owned enterprises (OECD 2002b: 31–36; and UNCTAD, 2003b). There is therefore a strong case to be made for trade for aid in a well-coordinated manner that would enable expanded capacity building. This is particularly important for LDCs and other low-income countries, which often lack the necessary technical and logistical infrastructure so vital for supporting quality assurance systems.

Given the declining levels of public expenditure in many countries, this situation is unlikely to improve in the short term.[32] In addition, although foreign assistance is essential, deep-rooted institutional problems will be difficult to overcome by technical assistance measures alone, which are more appropriate for isolated problems within an overall sound institutional setting. Developing countries need to adopt long-term strategies to improve the infrastructure needed by their companies to address ERHRs, focusing first on priority industrial sectors and key export markets. At the same time, developed countries should recognize that until this infrastructure is in place, ERHRs

will have a proportionally greater impact on the competitiveness of companies in developing countries than on those in their own jurisdictions. This implies a responsibility for developed countries to undertake all reasonable efforts to reduce the impact of ERHRs, including by governments, importing companies and, where relevant, non-governmental standards bodies.